

Surviving & Thriving: Exploring Resilience After Cancer

Thesis

Presented in Partial Fulfillment of the Requirements for the Bachelor of Science in Social Work
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Abstract

This study compares cancer survivors who have and have not participated in support groups and/or survivorship activities in terms of locus of control, hope, life satisfaction, and hardiness. The expected number of cancer survivors by 2024 will be about 19 million. It is critical for health care professionals and social workers to gain knowledge about resilience, including the role of participation in support groups and/or survivorship activities. An online survey was used to collect data from 43 men and women, aged 20 to 50, and 2 to 5 years post-cancer treatment. Participants first indicated their involvement in cancer support groups and/or survivorship activities (25 yes, 18 no). Subsequently, participants completed health locus of control, hope, hardiness, and life satisfaction scales. Participants then answered qualitative questions about the nature of their involvement in support groups and/or survivorship activities and their reasons for joining or not. Independent sample t-tests demonstrated no significant difference between participators and non-participators on any of the variables except for life satisfaction: $t(39) = 2.39, p = .022, 95\% \text{ CI} = .924, 11.05$. Those who participated in support activities had a higher mean. The types of survivorship activities participants described were group fundraising, online, and formal support groups. They participated for four reasons: fellowship, supporting others, fundraising, and research. Some people chose not to participate because they were too frightened of their diagnosis, it wasn't needed (minor cancer), not needed (other support), it wasn't available, or they couldn't relate. What they gained from involvement in these activities ranged from nothing to knowledge, purpose, kinship, and emotional/physical health. Sources of support non-participators utilized included family, friends, doctors, faith, workplace, and themselves. In conclusion, there are multiple pathways to resilience, including

but not limited to formal support and survivorship activities. Professionals could better connect people to survivorship resources, helping them thrive after cancer.

Dedication

It is my genuine gratitude and warmest regards that I dedicate this work to my mom, Margie, who has proven to be my inspiration. After her diagnosis of Chronic Myelogenous Leukemia in 2011, she was determined to fight. Fast forward five years, she is in remission. Her passion, drive, and dedication to cancer survivorship, is one reason I have a passion for the field of social work. Thank you for your constant support and affirmation along the way.

Acknowledgments

Thank you to The Ohio State University, College of Social Work for providing me with endless opportunities, financial stipends, and the ability to work with an outstanding honors thesis advisor and mentor, Dr. Audrey Begun. I thank you for providing me the utmost guidance, support, and encouragement throughout our time working together. Thank you to Jennie Babcock for all the time and energy you have channeled into nurturing the honors program into the success it is today. I contribute my participant success to the knowledge and resources that Rose Hallarn and Blair Gonsenhauser from the Center for Clinical and Translational Science provided. Thank you to Lauren Haas-Gehres for her knowledge, skills, and overall expertise in Qualtrics. Finally, thank you to my loving parents, Chuck and Margie, for your endless giving, support, and guidance throughout my academic career. Thank you for teaching me the value of striving for your best self while achieving your goals. Here's to another milestone down and the future to follow.

Curriculum Vitae

June 2011.....Bishop Watterson High School

August 2015.....Associates of Arts and Sciences,
The Ohio State University

May 2016.....B.S. Social Work, Honors Research Distinction,
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Field of Study

Undergraduate Field: Social Work

Graduate Field: Social Work

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Chapter 1: Introduction

Cancer has become a major public health problem worldwide. A disease that has become overwhelming in size, as the second leading cause of death in the United States, impacting many lives within the past decade (Siegel, Miller, & Jemal, 2015, p. 5). With its growing numbers, research for cures has become more prevalent, giving more and more individuals a fighting chance. It has been estimated that by January 1, 2024, the cohort of cancer survivors will increase to about 19 million (Cancer Treatment & Survivorship, 2014, p. 2). With the survivorship predicted to only increase, further steps must be taken to insure the best overall quality of life for these individuals both physically and mentally.

What classifies someone as a cancer survivor? According to the Cancer Treatment and Survivorship (2014), “A cancer survivor is any person who has been diagnosed with cancer, from the time of diagnosis through the balance of life” (p. 1). The term “survivor” often is applied to an individual who has finished active treatment (Cancer Treatment & Survivorship, 2014, p.1). Finding a “cure” for the cancer is the end goal during active treatment. Oncologists are actively trying to find ways to provide the highest quality of life during and after treatment. It is determined when all traces of the cancer have been removed from the patient’s body they have been cured.

Quality of life can impact the survivor’s resiliency during and after cancer. Long-term physical, social, and economic are concerns with which cancer-free survivors must continuously cope (Cancer Treatment & Survivorship, 2014 p.1). It is important to take into account the psychosocial needs of survivors because, just like physical health, mental health and overall wellbeing have been proven to factor into quality of life. By definition, psychosocial health services, “are psychological and social services and interventions that enable patients, their

families, and health care providers to optimize biomedical health care and to manage the psychological/ behavioral and social aspects of illness and its consequences so as to promote better health” (Alder & Page, 2008, p.69). Survivorship can at times be stressful and hopeful. Experienced cancer survivors could help those who are newly transitioning into this period of their journey by providing information about what helped them adjust to the “new normal.”

Statement of Problem. Significant mental health problems are common in cancer patients, such as anxiety and depression. Some meet the criteria for Post Traumatic Stress Disorder (PTSD) and Post Traumatic Stress Symptoms (PTSS) (Alder & Page, 2008, p. 3). “It is generally accepted that stress is more likely to influence the progression and recurrence of cancer than the initial onset of the disease” (Alder & Page, 2008, p.64). With the number of survivors estimated to increase to about 19 million (Cancer Treatment & Survivorship, 2014, p. 2), it is critical to take into account these individuals’ psychosocial needs. Often cancer care is incomplete, leaving many not having their psychosocial health needs addressed in their overall care. “Psychosocial health services distinguish between services directly needed by the patient (e.g., treatment for depression or financial assistance) and the interventions or strategies used to secure those services (e.g., screening, formal referral, or case management)” (Alder & Page, 2008, p. 69). There is a need to care for these survivors’ physical and mental health in the years following treatment. Participation in these activities could provide great benefits to the mental health and overall well-being. Survivorship activities are designed to nourish the mind, body, and spirit.

Study Purpose. This study compares cancer survivors who have and have not participated in support groups and/or survivorship activities in terms of locus of control, hope, life satisfaction, and hardiness. The aim is to explore how locus of control and involvement in

support groups and/or survivorship activities relate to resilience among cancer survivors. Long-term physical, social, and economic effects of treatment and fear of recurrence are among the concerns with which cancer-free survivors must continuously cope. It is critical for health care professionals and social workers to gain knowledge about resilience, including the role of participation in support groups and/or survivorship activities. The anticipated results from this study are exploratory and explanatory, concerning how participation in support groups and/or survivorship activities, and locus of control relate to resilience among cancer survivors.

Specifically, resilience is measured by hope, life satisfaction, and hardiness. It is critical for health care professionals and social workers to gain knowledge about reliance, including the role of participation in support groups and/or survivorship activities impact on oncology patients and clients. Results about the types and amounts of activities that have successfully helped these survivors will help inform professional support for other cancer survivors.

Research Objective.

1. To investigate how support groups and/or survivorship activities impact resilience in cancer survivors based on the variables of hope, life satisfaction, hardiness, and locus of control.
2. To gain knowledge about the reasons for participating and not participating in support groups and/or survivorship activities.
3. To gain knowledge about types of support groups and survivorship activities utilized by survivors and the types of support used by those who were not involved in survivorship activities.
4. Gain knowledge about what the participants believed contributed to their resilience.

Chapter 2: Literature Review

Cancer survivors have the opportunity to teach and share about their experiences of survivorship, which could be beneficial to health care professionals, social workers, and newly diagnosed patients. The importance of their insight comes about with the increasing magnitude of this disease and those joining the survivorship cohort. According to Siegel, Miller, and Jemal (2015), “Cancer is a major public health problem in the United States and many other parts of the world. It is currently the second leading cause of death in the United States, and is expected to surpass heart diseases as the leading cause of death in the next few years” (p. 5). Cancer is a disease that has become overwhelming in impacting and touching the lives of many across the world. Cancer has become a word with great stigma attached. Over the past few decades, efforts have been made to decrease this stigma, allowing support networks, fundraising, research, and organizations to be created, supported, and welcomed by communities.

Trueland (2013) predicted that in “2020 almost one in two people in the UK will get cancer in their lifetime, but almost four in ten will not die from the disease” (p. 17). Thanks to the medical field’s progression toward cures, those given a cancer diagnosis are now given a brighter outlook. It was estimated in Siegel, Miller, and Jemal (2015) that the total number of new cases of cancer in 2015 for both males and females would be 1,658,370. For males alone, it is estimated to be 848,200; for females it is estimated to be 810,170 (p.5). Of those new cases, 220,740 are expected to join the cohort of survivors. It has been estimated that by January 2024, the cohort of cancer survivors will increase to about 9.3 million males and 9.6 females (Cancer Treatment & Survivorship, 2014, p. 2).

Understanding the definition of a cancer survivor is critical to further gain knowledge around resiliency. According to the Cancer Treatment & Survivorship (2014), “A cancer

survivor is any person who has been diagnosed with cancer, from the time of diagnosis through the balance of life” (p. 1). The term “survivor” often is applied to an individual who has finished active treatment (Cancer Treatment & Survivorship, 2014, p.1). It is determined that when all traces of the cancer have been removed from the patient’s body, they have been cured.

Traditional healthcare focuses on the patient’s journey from the time of diagnosis through the time of a cure. Oncologists are actively trying to find ways to provide the highest quality of life during and after treatment. After active treatment is completed, the types of care shifts: “Both the interpersonal support system and the medical treatment team rallies around the affected individual during the acute diagnosis and treatment period. Cancer patients often comment on the relatively sharp down turn in active support once they complete treatment” (Ganz, Krupnick, Meyerwitz, Sears, & Stanton, 2005, p. 2609). With survival rates increasing, new challenges are emerging. A shift has occurred in the healthcare focus from curing cancer to caring for survivors in the years following. Trueland (2013) believes that cancer has a cure, but at what cost to the individual? Cancer and its treatment often leave behind a taxing physical and mental relic, leaving many to wonder what is being done to help these individuals now that treatment is over.

There are several ways to support survivors throughout their journey such as listening, encouraging, acknowledging, navigating, mentoring, and encouraging patients. Trueland (2013) suggested that it is also important to encourage survivors to eat well and be active. The lack of after care for survivors leaves them feeling abandoned. There are also several myths of treatment completion such as the expectation that the end of treatment should be celebrated, recovery to full health status occurs soon after the completion of treatment, patients return to their pre-diagnosis sense of self, and the individual does not need support after treatment is complete

(Ganz, Krupnick, Meyerwitz, Sears, & Stanton, 2005, p. 2609). These are all part of the adaptive tasks of reentry post cancer treatment. Reentry and adjustment into survivorship can be taxing, between lack of support and preponderance of myths, and these ultimately can impact resiliency.

The Cancer Treatment and Survivorship (2014) authors strongly believe that, “even cancer-free survivors must cope with the long-term effects of treatment, as well as psychological concerns such as fear of recurrence. Cancer patients, caregivers, and survivors must have the information and support they need to play an active role in decisions that affect treatment and quality of life” (p. 1). Survivorship can at times be stressful and hopeful. “Survivors are relieved to have completed treatment, but may have to make physical, emotional, social, and spiritual adjustments to their lifestyle – in other words, to find a “new normal” ” (Cancer Treatment & Survivorship, 2014, p. 26). Experienced cancer survivors could help those who are newly transitioning into this period of their journey by providing information about what helped them adjust to the “new normal.”

The road to resiliency can be challenging and rewarding especially during the time of transitioning from patient to survivor. “Understanding the extent to which cancer survivors show psychological impairments, resilience, or thriving necessitates a reference for “normal” or “baseline” functioning (Costanzo, Singer, & Ryff, 2009, p. 147). Dingley and Roux (2014) reported that those who experienced inner strength have enhanced quality of life (p. 40). This is often times referred to as resiliency. Suggestions offered to those transitioning on how to be resilient include: stay positive, live to learn, hang on to humor, use self-care, and open your heart and mind to others. However, research has proven that resiliency is more complex. “Resiliency occurs in domains proposed to be influenced by posttraumatic growth, including, measures of

social relationships, spirituality, and a direct measure of personal growth” (Costanzo, Singer, & Ryff, 2009, p. 154).

Anxiety and distress can impact the overall quality of life of patients and survivors with cancer. “Cancer survivors are resilient not only in spite of their cancer, but also in the face of greater mood disturbance and psychiatric symptoms” (Costanzo, Singer, & Ryff, 2009, p. 155). Having social support and physical activity (PA) is important for adult cancer survivors to gain resiliency. Physical inactivity is associated with the development of certain cancers, along with cancer recurrences: “More than 30% of cancers worldwide could be prevented by modifying risk factors such as physical inactivity and providing a supportive social environment that is amenable to PA participation” (Barber, 2013, p. 481). It is important for healthcare professionals to make physical activity integral in the after treatment plan. Life after a cancer diagnosis and treatment can be greatly impacted by physical, psychosocial, and financial factors. Coleman, Berg, and Thompson, (2014) believe that “Encouraging cancer patients to be more physically active and consume more fruits and vegetables could be a way to impact cancer survivors’ survivorship,” (p. 414).

The most notable finding from Coleman, Berg, and Thompson’s (2014) research was that the participants’ quality of life was significantly impacted by social support. Caregivers, family, and friends, provided the support the patients needed to stay motivated and resilient. Social support has also been recognized as a positive influence for cancer patients. Barber (2013) suggests that nurses can leave a lasting impact on their patients: “Nurses are in a unique position to offers evidence-based information to cancer survivors and caregivers on the importance of adopting and maintain a healthy lifestyle that includes PA” (p. 487). The nurses are able to encourage cancer survivors and caregivers to freely discuss their social support needs. They are

also able to act as a support for the client's participation in strategies that will improve their physical activity and quality of life. "Cancer survivors are resilient not only in spite of their cancer, but also in the face of greater mood disturbance and psychiatric symptoms" (Costanzo, Singer, & Ryff, 2009, p. 155).

The importance of social support, guidance, healthy living, and physical activity are all key factors in the journey of survivorship. Having support and guidance from experienced survivors could have strong effects on those who are newly transitioning into the world of the "new normal." Trueland (2013) believes that, "If services are adapted to cover the entire cancer journey, it is likely that nurses will be with survivors every step of the way" (p. 18). This statement may be equally true of social workers. This extended-care mentality could take away the anxiety of the transition to the "new normal." The present study examined cancer survivors' journeys and identified the role that social workers and health care professional play in the post treatment journey.

Chapter 3: Methodology

The research design was a cross-sectional survey involving quantitative and qualitative methods. The inclusion of quantitative and qualitative questions allowed the researcher to explore and explain possible relationships revealed from the survey.

Participants

The inclusion criteria were participants as adults under the age of 50, who were 18 or older when diagnosed, and are 2 to 5 years post last treatment. Therefore, the youngest participants would need to be at least 20 years of age. The post-treatment parameter was established to support accurate recall of the experience and to learn about individuals in remission or cured. An exclusion factor was related to language, as the survey was only available in English. Individuals unable to read English were expected to self-select out of engaging in the study.

Forty-three adult men and women meeting the study criteria were recruited through ResearchMatch, StudySearch, and flyers posted at JamesCare at University East. JamesCare Mammography at Carepoint Gahanna, The James at Martha Morehouse Medical Plaza, and Cancer Support Community Central Ohio. Participants self-identified involvement (n=25) or non-involvement (n=18) in cancer support groups and/or survivorship activities.

Participant Recruitment Procedures

The first step of the recruitment plan was to utilize the ResearchMatch and StudySearch systems. Individuals who reached out to the study in response to the ResearchMatch and/or StudySearch postings were then contacted.

ResearchMatch currently has 77,662 national volunteers registered on the site. Of those national volunteers, 5,2190 are in the age range of 20 to 50. ResearchMatch has growing

numbers of volunteers daily. If only 5% of these individuals were eligible for the study that would allow for a pool of 2,600. Individuals meeting the study criteria were notified about the study from the ResearchMatch system and then were further contacted by the study investigator once they had responded to the recruitment message voluntarily.

StudySearch is a website of The Ohio State University Center for Clinical and Translational Science (CCTS). It serves as an online repository for Ohio State University research studies seeking volunteers. Potential participants learn about the study and contact the investigators voluntarily. StudySearch is a space where the research study seeking volunteer participants can be listed. Interested potential participants contact the study investigator.

The second step of the recruitment plan was distributing flyers to cancer support programs through The James network, part of The Ohio State University's Wexner Hospital system, and through The Cancer Support Community of Central Ohio, a community-based agency. The Cancer Support Community of Central Ohio services the recruitment population, thus many individuals that attend programs at the Cancer Support Community met recruitment criteria, making this an ideal location to post recruitment materials.

The recruitment materials advertised the requirements to take part in the study including:

- Are you an adult cancer survivor?
 - You may be eligible to participate in a 20-minute online survey providing insight into the journey of survivorship and what contributes to resilience.
- Investigators at The Ohio State University would like to hear from:
 - About 100 men and women
 - Aged 20-50
 - 2 to 5 years post cancer treatment

Participants were compensated with a chance to randomly win one of thirty \$20 Amazon.com gift cards. The odds of winning the drawing were described as being at least 1 in 4. At the end of the survey participants had the opportunity to sign up for the drawing of the amazon gift card or decline to be entered into the drawing. The two surveys did not have identifiable information linked. If the participant decided to opt out of the survey after consenting, they were still eligible to be entered into the incentive drawing.

The Ohio State University's Behavioral Sciences Institutional Review Board (IRB) reviewed all participant involvement activities.

Survey Procedures

Eligibility was determined through the two inclusion and exclusion questions at the start of the survey: age between 20 to 50 years and being 2 to 5 years post cancer treatment. A third question was used for purposes of tracking participants to the correct version of the survey: "Have you been involved in any cancer support groups and/or survivorship activities?" (yes or no). Everyone screened then participated in the survey; the screening process simply determined which of the study groups each person joined.

Measures and Variables

The survey measured three different types of variables: involvement in support groups and/or survivorship activities, locus of control, and resilience. The first question was a yes or no: did you engage in support groups or survivorship activities related to your cancer. This was to help sort these individuals into the two study groups. The second and third questions were then the follow-up qualitative questions: Why or why not? What do you believe you gained? Or, what sources of support did you use instead?

Health Locus of Control

Locus of control was measured through the 18-item Multidimensional Health Locus of Control Scales (MHLC) form A (Fischer & Corcoran, 2007; Wallston, Wallston, & DeVillis, 1978). This scale accesses the participants' beliefs that their health is or is not determined by their own behavior. In particular, the MHLC examines beliefs about three sources of control over health: internality in locus of control, powerful other locus of control, and chance locus of control. Participants rated on a 1 to 6 scale ranging from "strongly agree" to "strongly disagree". Scores were computed by summing the responses of Chance Health Locus of Control items (see appendix B, questions 14-17, items 2,4,9,11,15,16), Internality Health Locus of Control items (See appendix B, questions 14-17, items 1,6,8,12,13,17), and Powerful Health Locus of Control items (see appendix B, questions 14-17 sum of 3,5,7,10,14,18). The higher scores reflect greater external validity. Internal Consistency Reliability for this tool, using Cronbach's alpha, was reported by Wallston, Wallston, and DeVillis (1978) study as having ranged from .67 to .77 for all six scales, the three dimensions, and two parallel forms. When combining the two parallel forms to make a 12-item scale the alphas ranged from .83 to .86 for the three scales. The MHLC scales also have fairly good criterion validity, correlating with subjects' state of health (Wallston, Wallston, & DeVillis, 1978). There were also correlations of other measures of locus of control, except for the chance locus of control scale, between the MHLC scale and the Multidimensional Locus of Control Scales for Psychiatric Patients (Wallston, Wallston, & DeVillis, 1978). The difference between the two chance locus of control scales was they did not correlate on social desirability.

Resilience

Resilience was measured by the variables of hope, life satisfaction, and hardiness. The following tools measured these three variables: 6-item State Hope Scale (SHS) (Snyder, et al., 1996), 45-item Hardiness Scale (HS) (Bartone, Ursano, Wright, Ingraham, 1989), and 5-item Life Satisfactory Scale (SWLS) (Diener, Emmons, Larsen, Griffin 1985).

Hope. The 6-item State Hope Scale (SHS) (Fischer & Corcoran, 2007; Snyder, et al., 1996) measures hope as a state that is linked to the ongoing events in an individual's life. Providing a glimpse into the participant's current goal-directed thinking. Participants rated on a 1 to 8 scale on how much they agreed on each statement, ranging from "Definitely True" to "Definitely False." Summing the responses on the 6-item for a total scale score completed scoring (see appendix B, items 18 and 19). The higher the score the greater amount of hope, scores can range from a low of 6 to a high of 48.

Excellent internal consistency was demonstrated by Snyder, et al. (1996) using the SHS. Alpha scores were .93 for the total scale, .91 for the agency subscale, and .91 for the pathways subscale. Variable stability correlated across any two days during the four-week period of the Snyder, et al. (1996) study, ranging from .48 to .93 in correlation coefficients. Construct validity was established, correlating in predicted directions with the Dispositional Hope Scale and State Self-Esteem, State Positive Affect, and State Negative Affect Scales (Snyder, et al., 1996).

Hardiness. The 45-item Hardiness Scale (HS) aims to measure resiliency to stress (Fischer & Corcoran, 2007; Snyder, et al., 1996). The type of resiliency the instrument measures is dispositional, the hardiness of one's personality. Hardiness relates to how one approaches and interprets experiences. There are three components and subscales to the HS: commitment (assigned meaning and purpose to self, others, and work), control (sense of autonomy and

influence on ones' future), and challenge (appetite and excitement for life- observed as opportunities for growth). How individuals process and cope with stressful events has been related to Hardiness and has been associated with high levels of well-being. Participants rated on a 1 to 4 scale on how much they agreed on each statement ranging from "Not At All True" to "Completely True." Taking the mean scores of the recorded and reversed scored items (see Appendix B, questions Q20-Q30 items Q20_3, Q20_4, Q21_1, Q21_2, Q21_3, Q22_1, Q22_2, Q22_3, Q23_1, Q23_3, Q24_1, Q24_3, Q25_2, Q25_4, Q26_3, Q27_1, Q27_2, Q27_4, Q28_1, Q28_3, Q28_4, Q29_2, Q29_4, Q30_1, Q30_2, Q30_3) resulted in the three measures of hardiness: Hardiness Commitment Scale (see Appendix B questions Q20-Q30, items Q20_1, Q21_3R, Q21_4, Q22_1R, Q23_4, Q24_1R, Q25_2R, Q25_3, Q27_1, Q27_1R, Q28_3R, Q29_1, Q29_3); Hardiness Control Scale (See Appendix B, questions Q20-Q30, items Q20_2, Q20_3R, Q20_4R, Q22_2R, Q22_4, Q23_1R, Q24_2, Q25_1, Q25_4R, Q26_2, Q26_3R, Q27_4R, Q29_4, Q30_1R); and Hardiness Challenge Scale (See Appendix B, questions Q20-Q30 items Q21_1R, Q21_2R, Q22_3R, Q22_2, Q22_3R, Q24_3R, Q24_4, Q26_1, Q26_4, Q27_2R, Q27_3, Q28_1R, Q28_2, Q28_4R, Q29_2R).

Snyder, et al. (1996) found Internal Consistency alpha scores of .62, .66 and .82 respectively for the subscales of hardiness challenge, control, and commitment. HS had a total alpha summated scale of .85. From a pool of 76 items, the HS 45-item scale was created. Correlation of the scale scores was .93 with total score on the 76-item version. Principle components factor analysis supported the three-subscale structure (Snyder, et al., 1996).

Life Satisfaction. The short, uni-dimensional, 5-item Satisfaction Scale aims to assess subjective satisfaction such as judgment of his or her quality of life (Fischer & Corcoran, 2007; Diener, Emmons, Larsen, & Griffin, 1985). A key component to mental well-being is life

satisfaction. Participants rated on a 1 to 7 scale on how much they agreed on each statement, ranging from “Strongly Agree” to “Strongly Disagree.” Summing the responses on the 5-item instrument for a total scale completes the scoring process (See appendix B, question Q31, items 1,2,3,4,5). Scores can range from 5 to 35 with higher scores reflecting more life satisfaction.

From a pool of 48 items, the 5-item SWLS was selected through factor analysis (Diener, Emmons, Larsen, & Griffin, 1985). According to Diener, Emmons, Larsen, and Griffin (1985) study, internal consistency is very good, with an alpha score of .87. SWLS also has excellent test-retest reliability, with correlations over a two-month period of .82, demonstrating its stability (Diener, Emmons, Larsen, & Griffin, 1985). Concurrent validity was tested by using two samples of college students, correlating scores with nine measures of subjective well-being for both; there was not a correlated measure of affect intensity for the scale (Diener, Emmons, Larsen, & Griffin, 1985). A correlation has been shown with self-esteem, a checklist of clinical symptoms, neuroticism, and emotionality. Another correlation was detected with an independent rating of life satisfaction in the elderly (Diener, Emmons, Larsen, & Griffin, 1985).

Qualitative. The survey closed with the qualitative question: “What do you think might have contributed to your resilience as a cancer survivor?” Open-ended questions were asked in order to collect rich descriptive data about the participants’ experiences to help further interpret the quantitative data. (See appendix B, questions Q9, Q10, Q11, Q12, Q13, Q32).

Detailed Study Procedures

Volunteers were provided with a link to an electronic survey, managed through Qualtrics. Each individual was able to consent or decline participation prior to beginning the survey. Once consent was given, access to the survey was granted.

The Qualtrics survey tracked the participants into one or the other group: those who have and those who have not engaged in cancer support group programs and/or survivorship activities. The tracking question determined which initial demographic and final qualitative questions Qualtrics delivered. The survey then led into the quantitative questions from the measurement tools for the variables of hope, life satisfaction, and hardiness. Following this section the participants then answered a series of qualitative questions. These questions gave a sense as to what types support groups and/or survivorship activities the participants were involved in and, if they were not involved in any, what led them to this decision. This was then the conclusion of the electronic survey. The survey took around 20-25 minutes to complete. A separate link was provided for the participants to voluntarily enter into the incentive drawing.

Chapter 4: Results

Quantitative Results

All data from the survey was exported into an SPSS data file. SPSS version 22 was used for the analyses. An independent sample *t*-test was conducted for all of the following variables: Life Satisfaction, Health Locus of Control (Chance, Internality, and Powerful Other), Hardiness Scale (Commitment, Control, and Challenge), and State Hope. Allowing comparisons to be made between the “Yes” and “No” group on each variable.

Table 1: Quantitative Result Statistics

Variable Name	mean for yes group	mean for no group	degrees of freedom	<i>t</i> -value	<i>p</i> value	95% CI
Life Satisfaction	23.800	17.813	39	2.39	0.022, *	(0.924, 11.05)
Health Locus of Control- Chance	19.240	11.765	40	1.159	0.253, NS	(-4.579, 16.889)
Health Locus of Control- Internality	24.920	18.765	40	1.159	0.253, NS	(-4.579, 16.889)
Health Locus of Control- Powerful Other	24.920	18.765	40	1.159	0.253, NS	(-4.579, 16.889)
Hardiness Scale- Commitment	2.901	2.885	40	0.046	0.963, NS	(-0.688, 0.720)
Hardiness Scale- Control	3.019	2.964	40	0.814	0.420, NS	(-0.082, 0.192)
Hardiness Scale- Challenge	1.246	2.359	40	0.269	0.212, NS	(-2.885, 0.660)

State Hope	36.240	34.294	40	0.766	0.448, NS	(-3.190, 7.082)
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Note: * = $p < .05$, ** = $p < .01$, *** = $p < .001$, NS = not significant

Summary of Quantitative Results. Referencing Table 1, an independent sample t-tests demonstrated no significant difference between support group participators and non-participators on any of the variables except for Life satisfaction: $t(39) = 2.39$, $p = .022$, 95% CI = .924, 11.05. Those who participated in support activities had a higher mean ($M = 23.8$, $SD = 7.5939$ and $M = 17.8$, $SD = 8.1668$) respectively. (Appendix B Q14-Q31)

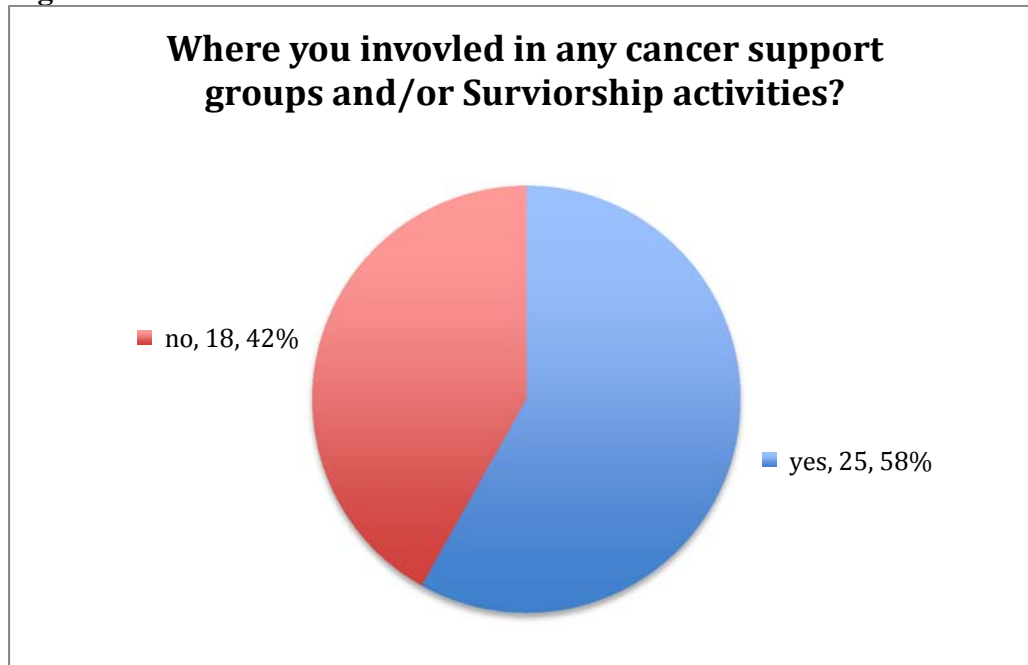
Qualitative Results

All data from the survey was exported into a Microsoft Word file. The results were then analyzed through a thematic coding process, where similar statements were grouped together. Comparisons were made between the “Yes” and “No” group around involvement, support, and overall contribution to their resiliency.

Qualitative Research Question 1: Where you involved in any support groups and/or survivorship activities?

Survey results found that 25 (58%) participants were involved in any support groups and/or survivorship activities, while 18 (42%) were not involved. The self-selected yes/no question further placed each participant into the selected category of “Yes” and “No”. Ultimately comparing the “Yes” group’s responses to the “No”. (Appendix B- Q6)

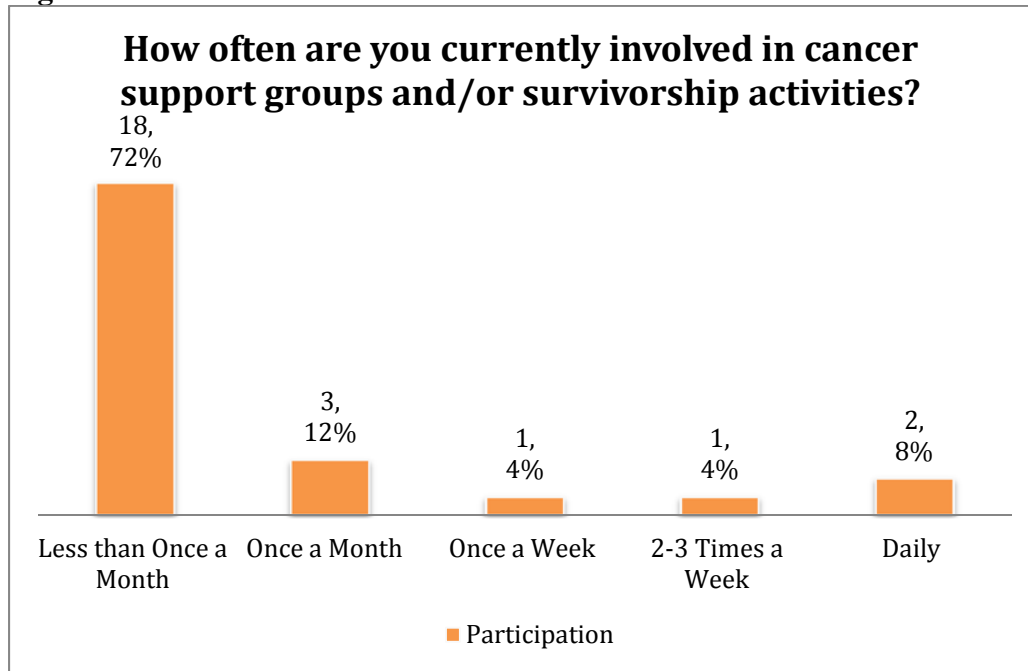
Figure 1



Qualitative Research Question 2: How often are you currently involved in cancer support groups and/or survivorship activities?

Survey results found that 72% of the participants were involved in cancer support groups and/or survivorship activities less than once a month. Followed by 12% of participants attending once a month, 4% once a week, 4% two to three times a week, and 8% daily. These results are demonstrated in Figure 2. (Appendix B- Q7)

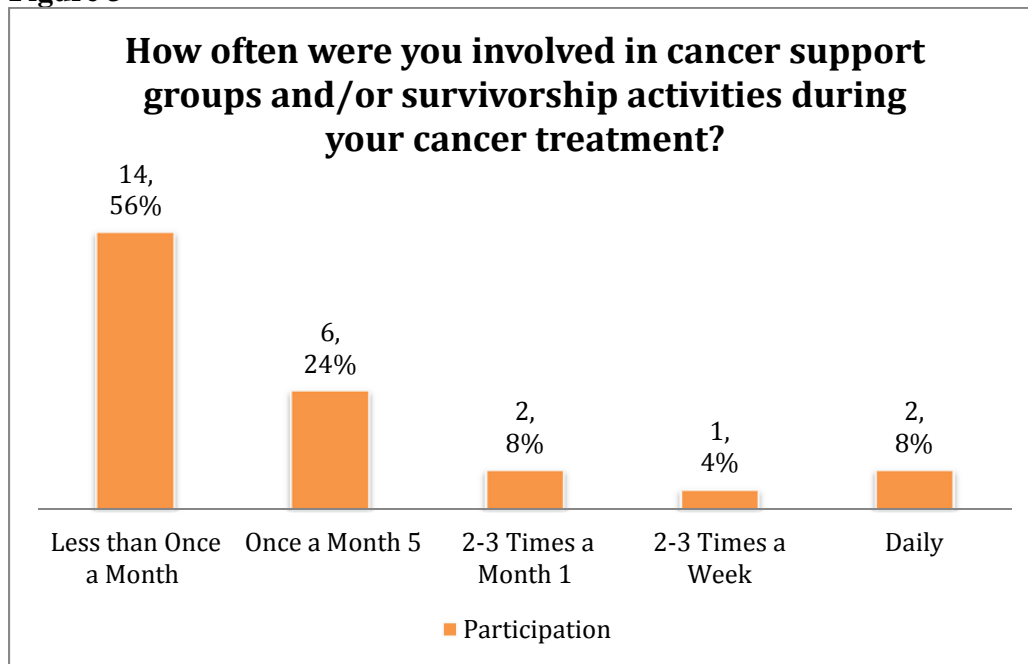
Figure 2



Qualitative Research Question 3: How often were you involved in cancer support groups and/or survivorship activities during your cancer treatment?

Survey results found that 56% of the participants were involved in cancer support groups and/or survivorship activities less than once a month during the time of treatment. Followed by 24% of participants attending once a month, 4% two to three times a month, 4% two to three times a week, and 8% daily. These results are demonstrated in Figure 3. (Appendix B- Q8)

Figure 3



Qualitative Research Question 4: What types of support groups and/or survivorship activities were you involved in throughout your journey? (Appendix B- Q9)

The types of survivorship activities participants described were an array of activities. Some chose to participate in group fundraising such as Relay for Life, Susan G. Komen Race for the cure, Making Strides Against Breast Cancer, donations for cause specific cancers, etc. Others participated in exercise groups, such as rowing, running, programs at the YMCA, and walks/races. Some chose to choose technology as a way to connect with others through online groups/networking, while others chose a more traditional support groups.

Qualitative Research Question 5: Why did you choose to be involved in cancer support groups or survivorship activities? (Appendix B- Q10)

When asked to discuss their reason for involvement they participated for four reasons: fellowship, supporting others, fundraising, and research. Fellowship brought reliability, hope,

and comradely to these individuals while being supported by those who have been in their shoes. Supporting others was a way to provide hope and meaning to these participants. They developed bonds with others who are in similar situations. They were also able to give back to others what was once given to them. Fundraising provided donations to cause specific organizations and provided hope and support to others why participating in the activities. Engaging in research was a form of empowerment.

Qualitative Research Question 6: What did you gain from your involvement in cancer support groups and/or survivorship activities? (Appendix B- Q11)

What they gained from involvement in these activities ranged from nothing to knowledge, purpose, kinship, and emotional/physical health. Some openly discussed that they did not gain anything from their time involved in these activities. However, those that were involved gained invaluable knowledge, support, and hope. Those who participated in these activities nurtured both their emotional and physical health.

Qualitative Research Question 7: Why did you choose not to be involved in cancer support groups or survivorship activities? (Appendix B- Q12)

Some individuals ultimately chose not to participate in any survivorship activities because they were too frightened of their diagnosis, it wasn't needed (minor cancer), not needed (other support), it wasn't available, or they couldn't relate. Some discussed openly about their disappointment with the lack of information and resources given to them during treatment and beyond. Others discussed their contentment with their own personal support system.

Qualitative Research Question 8: What source of support did you use instead of cancer support groups and/or survivorship activities? (Appendix B- Q13)

Sources of support non-participants utilized included family, friends, doctors, faith, workplace, and themselves. It appeared that those who did not utilize formal support groups or survivorship activities did have others to lean on. This resulted aimed to be positive because these individuals have protective factors and support systems in place. Protective factors are important when an individual is struggling emotionally. These factors can play a role in bringing hope and positivity back into their lives. It is important to have a strong support system for similar reasons.

Qualitative Research Question 9: As a final question, please share what you think might have contributed to your resilience as a cancer survivor? (Appendix B- Q32)

Overall there are several pathways to resilience. It is important to take a first hand look into what these cancer survivor participants felt contributed to their resiliency. For those who chose to lean on individuals/ groups the top responses were Family, Friends, and faith/religion/God, significant others, colleagues. Of these chosen individuals/ groups some would become a role model for an image of hope for the survivor. Some had emotions drive their resiliency, such as fear, gratitude, hope, positivity, determined to overcome the odds, perseverance, and optimism. Others chose self-motivation through refocusing priorities, choosing not to dwell on the negative, empowerment through research and education, hard work, opportunities, life lessons, and life changes for the mental and physical health (nutrition, exercise, positive energy). Survivorship takes will power and strength by appreciating the little things in life, working hard, having a strong mind, and surrounding ones self with encouragement. Survivorship ultimately involves finding value and happiness.

Chapter 5: Discussion

Summary of Qualitative and Quantitative Results

This study found that those who were a part of the “Yes” group had a higher mean of life satisfaction in comparison to the “No” group. Participating in support groups and/or survivorship activities can produce positive outcomes. This study contributed to identifying the type of survivorship activities that might influence the reentry transition for cancer survivors. The types of survivorship activities participants described were group fundraising, online, and formal support groups. They participated for four reasons: fellowship, supporting others, fundraising, and research. Some people chose not to participate because they were too frightened of their diagnosis, it wasn’t needed (minor cancer), not needed (other support), it wasn’t available, or they couldn’t relate. What they gained from involvement in these activities ranged from nothing to knowledge, purpose, kinship, and emotional/physical health. Sources of support non-participants utilized included family, friends, doctors, faith, workplace, and themselves. There were three overall contributions to resiliency: individuals/ groups, emotions, and self-motivation. Finding value and happiness in survivorship is key.

The results from this study indicated the need for personalized treatment plans and survivorship activities that will contribute to positive reentry post cancer treatment. Not everyone benefits from the same kinds or levels of involvement. Knowledge has been gained that support groups and survivorship activities do contribute to a higher overall life satisfaction for some participants. Others who are also embarking on a similar journey are able to gain insight around the positive effects of participating in such activities. Still others prefer to rely on resilience

resources of a different nature, and some who may have derived benefit did not become engaged for a variety of somewhat individual reasons.

Limitations

The first limitation to this study was the number of individuals recruited. The total number of individuals recruited was enough for the study to be statistically analyzed. However, more participants recruited would have provided more informed results with greater power to detect group differences, further providing a deeper understanding of survivorship. Recruitment efforts were most successful online through ResearchMatch and Study Search; participants did not respond to flyers and posters.

Another limitation was an error by the researcher in setting up the questionnaire. Specifically, two questions (10 and 24 on the original instrument) were accidentally omitted from the survey on the hardiness scale. This mistake was addressed by using a mean score for the items included instead of a sum.

Practice Implications

Survivorship is dynamic, constantly changing, and has moments of stress involving psychosocial concerns and worries. The survivorship period provides opportunities to improve the overall health and quality of life of survivors and the overall delivery system for meeting their psychosocial needs. The need for improvements comes from the research investigated around the multiple pathways to resilience, including but not limited to formal support and survivorship activities. Professionals could better connect individuals desiring them to survivorship resources, helping them thrive after cancer. Lack of information, knowledge, and skills needed to manage the illness, brings about stressors as a consequences of cancer, ultimately impacting the survivorship process. “Although not all individuals treated for cancer

face these problems, individuals who do so need the knowledge, skills, and abilities to manage them and function at their highest possible level” (Alder, Page, 2008, p. 37). When these resources are not available, the ability to manage stressors impacts the overall quality of life of the individual.

If social workers and healthcare professionals made improvements to the delivery system of survivorship more individuals may be more likely to attend. “Cancer survivors represent a very large at-risk population, and without evidence-based clinical practice guidelines, health care providers will vary widely in their practices, leading to inefficiencies in care delivery” (Hewitt, Greenfield, Stovall, 2006, p.155). Promoting and tailoring a personalized care plan after active treatment would be the first step to insuring positive outcomes for patients. Clearly articulating the benefits of participating in support groups and/or survivorship activities would ultimately increase overall life satisfaction for these individuals in the years to follow.

Future Research Implications

While the information provided in this study was important for providing insight into resilience among cancer survivors, there is a need for more research to fully understand the growth that these participants experienced during their time of transition from patient to survivor. If the objectives of this study were to be explored in the future there would need to be a more extensive method of surveying. Ideally, this would involve following individuals longitudinally, from the very beginning of diagnosis to several years post-treatment, in order to gain a sense of the developmental course and significance of hope, life satisfaction, hardiness, and locus of control. Having an initial baseline would further strengthen the results of this study, as would learning more about the ways that resilience is achieved outside of these support activities. It would also be interesting to examine the overall current delivery system of support groups and

survivorship activities to evaluate “goodness-of-fit” with the dynamic needs of individuals as they journey through the transition to cancer survivor.

|

References

- Adler, N. E., & Page, A. (2008). *Cancer Care for the Whole Patient: Meeting Psychosocial Health Needs*. Washington, D.C.: *National Academies Press*.
- Barber, F. D. (2013). Effects of social support on physical activity, self-efficacy, and quality of life in adult cancer survivors and their caregivers. *Oncology Nursing Forum*, 40(5), 481-489. doi:10.1188/13.ONF.481-489
- Bartone, P., Ursano, R.J., Wright, K.M., Ingraham L.H., (1989). The impact of a military air disaster on the health of assistance workers, *Journal of Nervous and Mental Disease*, 177, 317-328. Instrument is in the public domain and reprinted with permission of Paul T.Bartone.
- Cancer Treatment & Survivorship. (2014, January 1). Retrieved February 15, 2015, from <http://www.cancer.org/acs/groups/content/@research/documents/document/acspc-042801.pdf>
- Coleman, S., Berg, C. J., & Thompson, N. J. (2014). Social support, nutrition intake, and physical activity in cancer survivors. *American Journal of Health Behavior*
- Costanzo, E. S., Ryff, C. D., & Singer, B. H. (2009). Psychosocial adjustment among cancer survivors: findings from a national survey of health and well-being. *Health Psychology: Official Journal Of The Division Of Health Psychology, American Psychological Association*, 28(2), 147-156. doi:10.1037/a0013221
- Diener, E., Emmons, R. A., Larsen, R. J., Griffin, S. (1985). The Satisfaction with Life Scale, *Journal of Personality Assessment*, 49, 71-75. Instrument reproduced with permission of Ed Diener.
- Dingley, C., & Roux, G. (2014). The role of inner strength in quality of life and self-management in women survivors of cancer. *Research In Nursing & Health*, 37(1), 32-41. doi:10.1002/nur.21579
- Fischer, J., & Corcoran, K. (2007). *Measures for clinical practice and research: A sourcebook*. Oxford: Oxford University Press.
- Hewitt, M. E., Greenfield, S., & Stovall, E. (2006). *From Cancer Patient to Cancer Survivor: Lost in Transition*. Washington, D.C.: National Academies Press.
- Siegel, R. L., Miller, K. D., & Jemal, A. (January 01, 2015). Cancer statistics, 2015. *Ca: A Cancer Journal for Clinicians*, 65(1), 5-29.
- Stanton, A. L., Ganz, P. A., Rowland, J. H., Meyerowitz, B. E., Krupnick, J. L., & Sears, S. R. (2005). Promoting adjustment after treatment for cancer. *Cancer*, 104(11 Suppl), 2608-2613.

- Snyder, C. R., et al. (1996) Development and validation of the State Hope Scale, *Journal of Personality and Social Psychology*, 70, 321-335.
- Trueland, J. (2013). Life after cancer. *Nursing Standard*, 27(48), 16-18.
- Wallston, K.A., Wallston, B.S., and DeVillis, R, (1978). Development of the Multidimensional Locus of Control (MHLC) Scales, *Health education Monographs*, 6, 160-170. Instrument reproduced with permission of Kenneth A. Wallston, Ph.D.

Appendix A



Behavioral and Social Sciences Institutional Review Board

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www.orrp.osu.edu

August 19, 2015

Protocol Number: 2015B0216
Protocol Title: SURVIVING & THRIVING: EXPLORING RESILIENCE AFTER CANCER, Audrey Begun, Social Work
Type of Review: Initial Review—Expedited
IRB Staff Contact: Jacob R. Stoddard
Phone: 614-292-0526
Email: stoddard.13@osu.edu

Dear Dr. Begun,

The Behavioral and Social Sciences IRB **APPROVED BY EXPEDITED REVIEW** the above referenced research. The Board was able to provide expedited approval under 45 CFR 46.110(b)(1) because the research meets the applicability criteria and one or more categories of research eligible for expedited review, as indicated below.

Date of IRB Approval: August 19, 2015
Date of IRB Approval Expiration: August 19, 2016
Expedited Review Category: 7

In addition, the research has been approved for a waiver of documentation of the consent process. (if none, delete).

If applicable, informed consent (and HIPAA research authorization) must be obtained from subjects or their legally authorized representatives and documented prior to research involvement. The IRB-approved consent form and process must be used. Changes in the research (e.g., recruitment procedures, advertisements, enrollment numbers, etc.) or informed consent process must be approved by the IRB before they are implemented (except where necessary to eliminate apparent immediate hazards to subjects).

This approval is valid for one year from the date of IRB review when approval is granted or modifications are required. The approval will no longer be in effect on the date listed above as the IRB expiration date. A Continuing Review application must be approved within this interval to avoid expiration of IRB approval and cessation of all research activities. A final report must be provided to the IRB and all records relating to the research (including signed consent forms) must be retained and available for audit for at least 3 years after the research has ended.

It is the responsibility of all investigators and research staff to promptly report to the IRB any serious, unexpected and related adverse events and potential unanticipated problems involving risks to subjects or others.

This approval is issued under The Ohio State University's OHRP Federalwide Assurance #00006378. All forms and procedures can be found on the ORRP website - www.orrp.osu.edu. Please feel free to contact the IRB staff contact listed above with any questions or concerns.

Michael Edwards, PhD, Chair
Behavioral and Social Sciences Institutional Review Board



Appendix B

Surviving & Thriving: Exploring Resilience After Cancer- Qualtrics Survey

Q1 Instructions: Please select one of the following choices that best describe your experience. Are you currently between the ages of 20 to 50 years?

- ☐ Yes (1)
- ☐ No (2)

If No Is Selected, Then Skip To Thank you for your interest in the re...

Q2 Instructions: Please select one of the following choices that best describe your experience. Has it been 2 to 5 years since you have completed cancer treatment?

- ☐ Yes (1)
- ☐ No (2)

If No Is Selected, Then Skip To Thank you for your interest in the re...

Q3 Instructions: Please select one of the following choices that best describe your experience. Have you been involved in any cancer support groups and/or survivorship activities?

- ☐ Yes (1)
- ☐ No (2)

If No Is Selected, Then Skip To The Ohio State University Consent to ...If Yes Is Selected, Then Skip To The Ohio State University Consent to ...

Q33 Thank you for your interest in the research study. However, your responses to the screening questions indicate that you do not qualify for this study or we have met our quota of people like you. Because of your interest we strongly encourage you to visit ResearchMatch and StudySearch for other opportunities to engage in research that might be in interest to you.

If Thank you for your interest... Is Displayed, Then Skip To End of Survey

Q5 The Ohio State University Consent to Participate in Research Study Title: Surviving and Thriving: Exploring Resilience After Cancer Researchers: Dr. Audrey Begun (PI) and Emily Peirano (CI) Sponsor: The Ohio State University College of Social Work This is a consent form for research participation. It contains important information about this study and what to expect if you decide to participate. Your participation is voluntary. Please consider the information carefully. Feel free to ask questions before making your decision whether or not to participate. If you decide to participate, you will be asked to electronically agree to this form. Purpose: The research object is to explore how locus of control and involvement in support groups and survivorship activities relate to resilience among cancer survivors. Specifically, resilience is measured by hope, life satisfaction, and hardiness. Procedures/Tasks: A survey will be used to complete the study. This will be an on-line electronic survey, through Qualtrics. Once consent is given, access to the survey will be granted. Duration: Depending on the participant, the survey should not take longer than 20-30 minutes. You may leave the study at any time. If you decide to stop participating in the study, there will be no penalty to you, and you will not lose any benefits to which you are otherwise entitled. Your decision will not affect your future relationship with The Ohio State University. Risks and Benefits: This research involves no more than minimal risks to the participants. You could experience some emotional risks, distress from recalling your cancer experience. Some benefits from the research to the participants will be that you are able to reflect back on your survivorship journey. Confidentiality: Efforts will be made to keep your study-related information confidential and no personal identifiers are being collected. We will work to make sure that no one sees your survey responses without approval. Protecting your privacy is important to us but, because we are using the Internet, there is a chance that someone could access your online responses without permission. In some cases, this information could be used to identify you. Your research records may be reviewed by the following

groups (as applicable to the research): · Office for Human Research Protections or other federal, state, or international regulatory agencies; ·The Ohio State University Institutional Review Board or Office of Responsible Research Practices. Incentives: \$20 Amazon.com gift cards will be randomly distributed to 30 participants. Your odds of winning the drawing are 1 in 4 though these odds could improve based upon the number of participants who enter into the drawing. At the end of the survey you will have the opportunity to sign up for the drawing of an amazon gift card or decline to be entered into the drawing. This opportunity appears as a link to a drawing pool where your contact information will be maintained separately from your main survey responses. Information you submit to enter into the drawing pool is being collected in a manner that ensures that this information is never linked to your specific survey response. If you decide to opt out of the survey you will still be eligible to be entered into the incentive drawing. Participant Rights: You may refuse to participate in this study without penalty or loss of benefits to which you are otherwise entitled. If you are a student or employee at Ohio State, your decision will not affect your grades or employment status. If you choose to participate in the study, you may discontinue participation at any time without penalty or loss of benefits. By agreeing to this form, you do not give up any personal legal rights you may have as a participant in this study. An Institutional Review Board responsible for human subjects research at The Ohio State University reviewed this research project and found it to be acceptable, according to applicable state and federal regulations and University policies designed to protect the rights and welfare of participants in research. Contacts and Questions: For questions, concerns, or complaints about the study, or you feel you have been harmed as a result of study participation, you may contact Audrey Begun at begun.5@osu.edu or telephone: (614)- 292-1064. For questions about your rights as a participant in this study or to discuss other study-related concerns or complaints with someone who is not part of the research team, you may contact Ms. Sandra Meadows in the Office of Responsible Research Practices at 1-800-678-6251.

- ☐ Yes, I consent (1)
- ☐ No, I do not consent (2)

If No, I do not consent Is Selected, Then Skip To End of Survey

Q6 Instructions: Please select one of the following choices that best describe your experience. Were you involved in any cancer support groups and/or survivorship activities? (For example but not limited to therapy, on-line groups, face-to-face groups, walks and/or races, or fundraising events)

- ☐ Yes (1)
- ☐ No (2)

Answer If Instructions: Were you involved in any cancer support groups and/or survivorship activities? (For example but not limited to therapy, on-line groups, face-to-face groups...Yes Is Selected

Q7 Instructions: Please select one of the following choices that best describes your support group and/or survivorship experiences. How often are you currently involved in cancer support groups and/or survivorship activities?

- ☐ Less than Once a Month (1)
- ☐ Once a Month (2)
- ☐ 2-3 Times a Month (3)
- ☐ Once a Week (4)
- ☐ 2-3 Times a Week (5)
- ☐ Daily (6)

Answer If Instructions:<xmlns:texthelpns rwthpgen="1">Were you involved in any cancer support groups and/or survivorship activities? (For example but not limited to therapy, on-line groups, face-to-face groups... Yes Is Selected

Q8 Instructions: Please select one of the following choices that best describes your support group and/or survivorship experiences. How often were you involved in cancer support groups and/or survivorship activities during your cancer treatment?

- ☐ Less than Once a Month (1)
- ☐ Once a Month (2)
- ☐ 2-3 Times a Month (3)
- ☐ Once a Week (4)
- ☐ 2-3 Times a Week (5)
- ☐ Daily (6)

Answer If Instructions: Were you involved in any cancer support groups and/or survivorship activities? (For example but not limited to therapy, on-line groups, face-to-face groups... Yes Is Selected

Q9 Instructions: Please provide in the next question a list and description of all activities. What types of support groups and/or survivorship activities were you involved in throughout your journey?

Answer If Instructions: Were you involved in any cancer support groups and/or survivorship activities? (For example but not limited to therapy, on-line groups, face-to-face groups... Yes Is Selected

Q10 Instructions: Please provide a short answer response (4-6 sentences) to answer the following question. Why did you choose to be involved in cancer support groups or survivorship activities?

Answer If Instructions: Were you involved in any cancer support groups and/or survivorship activities? (For example but not limited to therapy, on-line groups, face-to-face groups... Yes Is Selected

Q11 Instructions: Please provide a short answer response (4-6 sentences) to answer the following question. What did you gain from your involvement in cancer support groups and/or survivorship activities?

Answer If Instructions:<xmlns:texthelpns rwthpgen="1">Were you involved in any cancer support groups and/or survivorship activities? (For example but not limited to therapy, on-line groups, face-to-face grou... No Is Selected

Q12 Instructions: Please provide a short answer response (4-6 sentences) to answer the following questions. Why did you choose not to be involved in cancer support groups or survivorship activities?

Answer If Instructions:<xmlns:texthelpns rwthpgen="1">Were you involved in any cancer support groups and/or survivorship activities? (For example but not limited to therapy, on-line groups, face-to-face grou... No Is Selected

Q13 Instructions: Please provide a short answer response (4-6 sentences) to answer the following question. What source of support did you use instead of cancer support groups and/or survivorship activities?

Q14 Instructions: Please answer these first 18 items carefully, but without spending too much time on any one item. As much as you can, please try to respond to each item individually. When making your choice do not be influenced by your previous choices. It is important that you respond to your actual beliefs and not according to what you feel you should believe or how you think anyone else wants you to believe.

	Strongly Disagree (1)	Moderately Disagree (2)	Slightly Disagree (3)	Slightly Agree (4)	Moderately Agree (5)	Strongly Agree (6)
If I get sick, it is my own behavior which determines how soon I get well again. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No matter what I do, if I am going to get sick, I will get sick. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Having regular contact with my physician is the best way for me to avoid illness. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Most things that affect my health happen to me by accident. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q15 Instructions: Please answer these first 18 items carefully, but without spending too much time on any one item. As much as you can, please try to respond to each item individually. When making your choice do not be influenced by your previous choices. It is important that you respond to your actual beliefs and not according to what you feel you should believe or how you think anyone else wants you to believe.

	Strongly Disagree (1)	Moderately Disagree (2)	Slightly Disagree (3)	Slightly Agree (4)	Moderately Agree (5)	Strongly Agree (6)
Whenever I don't feel well, I should consult a medically trained professional. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am in control of my health (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My family has a lot to do with my becoming sick or staying healthy. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I get sick, I am to blame. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q16 Instructions: Please answer these first 18 items carefully, but without spending too much time on any one item. As much as you can, please try to respond to each item individually. When making your choice do not be influenced by your previous choices. It is important that you respond to your actual beliefs and not according to what you feel you should believe or how you think anyone else wants you to believe.

	Strongly Disagree (1)	Moderately Disagree (2)	Slightly Disagree (3)	Slightly Agree (4)	Moderately Agree (5)	Strongly Agree (6)
Luck plays a big part in determining how soon I will recover from an illness. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Health professionals control my health. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My good health is largely a matter of good fortune. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The main thing which affects my health is what I myself do. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I take care of myself, I can avoid illness. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q17 Instructions: Please answer these first 18 items carefully, but without spending too much time on any one item. As much as you can, please try to respond to each item individually. When making your choice do not be influenced by your previous choices. It is important that you respond to your actual beliefs and not according to what you feel you should believe or how you think anyone else wants you to believe.

	Strongly Disagree (1)	Moderately Disagree (2)	Slightly Disagree (3)	Slightly Agree (4)	Moderately Agree (5)	Strongly Agree (6)
When I recover from an illness, it's usually because other people (for example, doctors, nurses, family, friends) have been taking good care of me. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No matter what I do, I'm likely to get sick. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If it's meant to be, I will stay healthy. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I take the right actions, I can stay healthy. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Regarding my health, I can only do what my doctor tells me to do. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q18 Instructions: Please read each of the next 6 items carefully. Using the scale shown below, please select the response that best describes how you think about yourself right now. First, take a few moments to focus on yourself and what is going on in your life at this moment. Once you have this "here and now" mindset, go ahead and answer each item according to the following scale:

	Definitely False (1)	Mostly False (2)	Somewhat False (3)	Slightly False (4)	Slightly True (5)	Somewhat True (6)	Mostly True (7)	Definitely True (8)
If I should find myself in a jam, I could think of many ways to get out of it. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
At the present time, I am energetically pursuing my goals. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There are lots of ways around any problem that I am facing now. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q19 Instructions: Please read each of the next 6 items carefully. Using the scale shown below, please select the response that best describes how you think about yourself right now. First, take a few moments to focus on yourself and what is going on in your life at this moment. Once you have this "here and now" mindset, go ahead and answer each item according to the following scale:

	Definitely False (1)	Mostly False (2)	Somewhat False (3)	Slightly False (4)	Slightly True (5)	Somewhat True (6)	Mostly True (7)	Definitely True (8)
Right now, I see myself as being pretty successful. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can think of many ways to reach my current goals. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
At this time, I am meeting the goals that I have set for myself. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q20 Instructions: Below are statements about life that people often feel differently about. Read the items carefully, and indicate how much you feel each one is true in general. There are no right or wrong answers; just give your honest opinion.

	Not at all true (1)	A little true (2)	Quite true (3)	Completely true (4)
Most of my life gets spent doing things that are worthwhile. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Planning ahead can help avoid most future problems. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Trying hard doesn't pay, since things still don't turn out right. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No matter how hard I try, my efforts usually accomplish nothing. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q21 Instructions: Below are statements about life that people often feel differently about. Read the items carefully, and indicate how much you feel each one is true in general. There are no right or wrong answers; just give your honest opinion.

	Not at all true (1)	A little true (2)	Quite true (3)	Completely true (4)
I don't like to make changes to my everyday schedule. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
"The tried and true" ways are always best. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Working hard doesn't matter, since only the bosses profit by it. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
By working hard you can always achieve your goals. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q22 Instructions: Below are statements about life that people often feel differently about. Read the items carefully, and indicate how much you feel each one is true in general. There are no right or wrong answers; just give your honest opinion.

	Not at all true (1)	A little true (2)	Quite true (3)	Completely true (4)
Most working people are simply manipulated by their bosses. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It's usually impossible for me to change things at work. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
New laws should never hurt a person's paycheck. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I make plans, I'm certain I can make them work. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q23 Instructions: Below are statements about life that people often feel differently about. Read the items carefully, and indicate how much you feel each one is true in general. There are no right or wrong answers; just give your honest opinion.

	Not at all true (1)	A little true (2)	Quite true (3)	Completely true (4)
It's very hard for me to change a friend's mind about something. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It's exciting to learn something about myself. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People who never change their minds usually have good judgment. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I really look forward to my work. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q24 Instructions: Below are statements about life that people often feel differently about. Read the items carefully, and indicate how much you feel each one is true in general. There are no right or wrong answers; just give your honest opinion.

	Not at all true (1)	A little true (2)	Quite true (3)	Completely true (4)
Politicians run our lives. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I'm working on a difficult task, I know when to seek help. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I won't answer a question until I'm really sure I understand it. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like a lot of variety in my work. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q25 Instructions: Below are statements about life that people often feel differently about. Read the items carefully, and indicate how much you feel each one is true in general. There are no right or wrong answers; just give your honest opinion.

	Not at all true (1)	A little true (2)	Quite true (3)	Completely true (4)
Most of the time, people listen carefully to what I say. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Daydreams are more exciting than reality for me. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Trying your best at work really pays off in the end. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My mistakes are usually very difficult to correct. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q26 Instructions: Below are statements about life that people often feel differently about. Read the items carefully, and indicate how much you feel each one is true in general. There are no right or wrong answers; just give your honest opinion.

	Not at all true (1)	A little true (2)	Quite true (3)	Completely true (4)
It bothers me when my daily routine get interrupted. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It's best to handle most problems by just not thinking of them. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Most good athletes and leaders are born, not made. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I often wake up eager to take up my life wherever it let off. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q27 Instructions: Below are statements about life that people often feel differently about. Read the items carefully, and indicate how much you feel each one is true in general. There are no right or wrong answers; just give your honest opinion.

	Not at all true (1)	A little true (2)	Quite true (3)	Completely true (4)
Lots of times, I don't really know my own mind. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I respect rules because they guide me. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like it when things are uncertain or unpredictable. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can't do much to prevent it if someone wants to harm me. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q28 Instructions: Below are statements about life that people often feel differently about. Read the items carefully, and indicate how much you feel each one is true in general. There are no right or wrong answers; just give your honest opinion.

	Not at all true (1)	A little true (2)	Quite true (3)	Completely true (4)
People who do their best should get full support from society. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Changes in routine are interesting to me. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People who believe in individuality are only kidding themselves. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have no use for theories that are not closely tied to facts. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q29 Instructions: Below are statements about life that people often feel differently about. Read the items carefully, and indicate how much you feel each one is true in general. There are no right or wrong answers; just give your honest opinion.

	Not at all true (1)	A little true (2)	Quite true (3)	Completely true (4)
Most days, life is really interesting and exciting for me. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I want to be sure someone will take care of me when I'm old. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It's hard to imagine anyone getting excited about working. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
What happens to me tomorrow depends on what I do today. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q30 Instructions: Below are statements about life that people often feel differently about. Read the items carefully, and indicate how much you feel each one is true in general. There are no right or wrong answers; just give your honest opinion.

	Not at all true (1)	A little true (2)	Quite true (3)	Completely true (4)
If someone gets angry at me, it's usually no fault of mine. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It's hard to believe people who say their work helps society. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ordinary work is just too boring to be worth doing. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q31 Instructions: Below are five statements with which you may agree or disagree. Please indicate your level of agreement with each item. Please be open and honest in your responding.

	Strongly Disagree (1)	Disagree (2)	Slightly Disagree (3)	Neither Agree Nor Disagree (4)	Slightly Agree (5)	Agree (6)	Strongly Agree (7)
In most ways my life is close to my ideal. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The conditions of my life are excellent. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am satisfied with my life. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
So far I have gotten the important things I want in life. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I could live my life over, I would change almost nothing. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q32 Instructions: Please provide a short answer response (4-6 sentences) to answer the following question. As a final question, please share what you think might have contributed to your resilience as a cancer survivor?

Q34 If you would like to be entered into the drawing for 1 of 30 Amazon.com \$20 gift cards, please click [here](#). This will take you to a new survey where your contact information will be maintained separately from your survey answers here. If you feel the need to talk about your experiences further you might consider calling the Cancer Support Helpline toll free at 1-888-793-9355 or visit www.cancer.org/treatment

Appendix C

Dr. Audrey Begun
College of Social Work
The Ohio State University
1947 College Rd., 209 Stillman Hall
Columbus, OH 43210

Dear Dr. Begun:

The purpose of this letter is to grant Emily Peirano, a honors undergraduate student researcher at the Ohio State University permission to **recruit study participants** at the Cancer Support Community Central Ohio. The project, "Surviving & Thriving: Exploring Resilience After Cancer" entails participation in an online study which will provided insight into the journey of survivorship and what contributes to resilience (strength/spirit/resistance) of those who have had cancer. The research object is to explore how locus of control and involvement in support groups and survivorship activities relate to resilience among cancer survivors. Specifically, resilience is measured by hope, life satisfaction, and hardiness.

Ms. Peirano will post IRB-approved study recruitment flyers and invitational cards at the Cancer Support Community for letting interested parties know of the research project. Cancer Support Community was selected because we serve the population needed to conduct the study and because the study is likely to be interest to many people we serve.

As the Program Director for Cancer Support Community Central Ohio, I grant permission for Emily Peirano to conduct recruitment activities for her honors thesis study, Surviving & Thriving: Exploring Resilience After Cancer.

Sincerely,


Angie Santangelo

2/8/15

Surviving and Thriving:

Exploring Resilience After Cancer

Are you an adult cancer survivor?

You may be eligible to participate in a 20 minute online survey providing insight into the journey of survivorship and what contributes to resilience. The Ohio State University investigators would like to hear from you if you are:

- * 30 to 60 individuals who used cancer support groups and/or survivorship activities
- * 30 to 60 individuals who did not use cancer support groups and/or survivorship activities
- * Ages 20-50
- * 2 to 5 years post cancer treatment

\$20 gift cards will be randomly distributed to 30 participants[®]

If interested or desiring more information contact:

Emily Peirano
peirano.12@osu.edu



ResearchMatch Recruitment Message for This Protocol

PLEASE NOTE: The message that is sent must be under 2000 characters. Bolding and bulleting adds hidden characters. We encourage you to ask for assistance from rose.hallarn@osumc.edu or blair.gonsenhauser@osumc.edu with writing the message for your protocol prior to submission to IRB.

The message that is placed in the space on next page/under the email greeting that says: “A research team with The Ohio State University in Columbus, OH, believes you might be good match for the following study” is the message that the volunteers will receive about this protocol. *This initial email will be routed to those ResearchMatch volunteers who fit your inclusion criteria; ResearchMatch will provide hyperlinks at the close of the message that will allow volunteers to respond yes or no to the invitation to release their contact information to this study.* **The recruitment language the research team enters into this form SHOULD NOT include identifiable contact information such as email address or phone numbers.** This will help ensure that volunteers respond through the ResearchMatch quick links provided in the email message they receive regarding this study.

Volunteers will see the message. They are asked to click “yes” or “no” in response to the recruitment message. A “yes” response will release their contact information to the researcher. If volunteers click “yes” they are reminded again that their contact information will be released. If the volunteer clicks “no” or ignores the message, the researcher will not receive any information about the potential volunteer.

Sender: do-not-reply@researchmatch.org

Message Subject: ResearchMatch – you may be a good match for this research study!

SEE NEXT PAGE: Insert the message on the next page for which you are asking IRB approval to use as your ResearchMatch recruitment message.

This window contains the contents of the email that you will be sending out to your selected volunteers. Please proofread and confirm the information you are sending is valid and correct. If you need to make changes, simply click on '**close preview**'. If you want to submit this email message, click on '**contact volunteers**'.

Note to Researcher: Remember your message can be **NO LONGER THAN 2000 CHARACTERS**. **Bolding and bulleting adds hidden characters. See liaisons for assistance.**

A research team with The Ohio State University in Columbus, OH, believes you might be good match for the following study:

Surviving and Thriving: Exploring Resilience after Cancer

Would you like to help researchers gain insight into the journey of survivorship and what contributes to resilience (strength/spirit/resistance) of those who have had cancer? The information learned from this survey study may help others who are impacted by cancer in the future.

This survey will gather information from cancer survivors who HAVE and HAVE NOT used cancer support groups and/or survivorship activities.

You may be eligible to provide insight and participate in this online survey (approximately 20 minutes in length) if:

- You are between the ages of 20-50
- You are 2-5 years post cancer treatment
- You HAVE or HAVE NOT used cancer support groups and/or survivorship activities

\$20 gift cards will be randomly distributed to 30 of the participants who answer this survey and elect to enter the drawing for one of those cards.

If you or someone you know may be eligible for this study, please click "yes" so a member of the research team may contact you with more information.

If you are interested in this study and having the research team contact you directly, please select the "Yes, I'm interested" link below. By clicking the "Yes, I'm interested" link, your contact information will be released to the research team. If you select the "No, thanks." link or do not respond to this study message, your contact information will not be released to the research team.

[Yes, I'm interested!](#) [No, thanks.](#)

You are receiving this email message since you have registered in the ResearchMatch registry. Should you wish to edit your profile or remove your contact information from this registry, please login [here](#).

ResearchMatch Disclaimer

ResearchMatch is a free and secure tool that helps match willing volunteers with eligible researchers and their studies at institutions across the country. ResearchMatch is only providing a tool that allows you to be contacted by researchers about their studies. ResearchMatch therefore does not endorse any research, research institution, or study. Any recruitment message that you may receive about a study does not mean that ResearchMatch has reviewed the study or recommends that you consider participating in this study.

CLOSE PREVIEW